

Interference search
for 10/042,281 gvc

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	103	(semiconductor and die and heat and (conduit or via or channel or passage) and (material or metal or silver or copper) and heat).clm.	USPAT	OR	OFF	2005/09/06 17:26
L2	189	(semiconductor and die and heat and (conduit or via or channel or passage) and (material or metal or silver or copper) and heat).clm.	US-PGPUB; USPAT	OR	OFF	2005/09/06 17:26
L3	64	(semiconductor and die and heat and (conduit or via or channel or passage) and (material or metal or silver or copper) and heat and (localized or proximate or adjacent)).clm.	US-PGPUB; USPAT	OR	OFF	2005/09/06 17:26
L4	52	(semiconductor and die and heat and (conduit or via or channel) and (material or metal or silver or copper) and heat and (localized or proximate or adjacent)).clm.	US-PGPUB; USPAT	OR	OFF	2005/09/06 17:27
L5	14	(semiconductor and die and heat and (conduit or via or channel) and (material or metal or silver or copper) and heat and (localized or proximate or adjacent) and (dissipate or conduct or transfer)).clm.	US-PGPUB; USPAT	OR	OFF	2005/09/06 17:27

PLUS search
done.
LVC
9/27/04

10042281_CLSTITLES
Titles of Most Frequently Occurring Classifications of Patents Returned
From A Search of 10042281 on September 27, 2004

- 5 257/E23.004 (0 OR, 5 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR
SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
257/E23.003 .Mountings, e.g., nondetachable insulating
substrates (EPO)
257/E23.004 ..Characterized by shape (EPO)
- 5 257/E23.069 (0 OR, 5 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR
SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
257/E23.01 .Arrangements for conducting electric current
to or from solid-state body in operation, e.g.,
leads, terminal arrangements (EPO)
257/E23.023 ..Consisting of soldered or bonded
constructions (EPO)
257/E23.06 ...Leads, i.e., metallizations or lead frames
on insulating substrates, e.g., chip carriers (EPO)
257/E23.068Additional leads joined to metallizations
on insulating substrate, e.g., pins, bumps, wires, flat
leads (EPO)
257/E23.069Spherical bumps on substrate for external
connection, e.g., ball grid arrays (BGA) (EPO)
- 4 257/E23.101 (0 OR, 4 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.079 ..For integrated circuit devices, e.g., power
bus, number of leads (EPO)
257/E23.08 .Arrangements for cooling, heating, ventilating
or temperature compensation; temperature-sensing
arrangements (EPO)
257/E23.101 ..selection of materials, or shaping, to
facilitate cooling or heating, e.g., heat sinks (EPO)
- 3 257/714 (1 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/688 .with large area flexible electrodes in press
contact with opposite sides of active semiconductor
chip and surrounded by an insulating element, e.g., ring
257/712 .with provision for cooling the housing or its
contents
257/714 ..Liquid coolant
- 3 257/737 (2 OR, 1 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD
257/737 .Bump leads
- 3 257/E21.508 (0 OR, 3 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE
DEVICES OR OF PARTS THEREOF (EPO)
257/E21.002 .Manufacture or treatment of semiconductor
device (EPO)

10042281_CLSTITLES

257/E21.04 ..Device having at least one potential-jump
depletion barrier or surface barrier, e.g., PN junction,
layer, carrier concentration layer (EPO)

257/E21.499 ...Assembling semiconductor devices, e.g.,
treatment packaging , including mounting, encapsulating, or
of packaged semiconductor (EPO)

257/E21.506 Attaching or detaching leads or other
or conductive members, to be used for carrying current to
from device in operation (EPO)

257/E21.507 Formation of contacts to semiconductor by
e.g., use of metal layers separated by insulating layers,
(EPO) self-aligned contacts to source/drain or emitter/base

257/E21.508 Forming solder bumps (EPO)

3 257/E23.068 (0 OR, 3 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR
SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)

257/E23.01 .Arrangements for conducting electric current
to or from solid-state body in operation, e.g., leads,
terminal arrangements (EPO)

257/E23.023 ..Consisting of soldered or bonded
constructions (EPO)

257/E23.06 ...Leads, i.e., metallizations or lead frames
on insulating substrates, e.g., chip carriers (EPO)

257/E23.068 Additional leads joined to metallizations
on insulating substrate, e.g., pins, bumps, wires, flat
leads (EPO)

2 52/287.1 (0 OR, 2 XR)
Class 052 : STATIC STRUCTURES
52/287.1 CONDUIT, TRIM, OR SHIELD MEMBER AT CORNER

2 52/58 (1 OR, 1 XR)
Class 052 : STATIC STRUCTURES
52/58 EXTERIOR-TYPE FLASHING

2 52/631 (0 OR, 2 XR)
Class 052 : STATIC STRUCTURES
52/631 CORNER FORMED BY LAMINATE WITH BENT FACING
SECTION

2 99/348 (2 OR, 0 XR)
Class 099 : FOODS AND BEVERAGES: APPARATUS
99/324 COOKING
99/348 .With stirring

2 101/129 (0 OR, 2 XR)
Class 101 : PRINTING
101/114 STENCILING
101/129 .Processes

2 126/672 (0 OR, 2 XR)
Class 126 : STOVES AND FURNACES
126/569 SOLAR HEAT COLLECTOR
126/634 .With means to convey fluent medium through
collector

10042281_CLSTITLES

- 126/651 ..Conduit absorber structure
126/672 ...Circular nonmetallic conduit
- 2 164/122 (0 OR, 2 XR)
Class 164 : METAL FOUNGING
164/1 PROCESS
164/47 .Shaping liquid metal against a forming surface
164/122 ..Controlling solidification (other than ambient cooling)
- 2 164/133 (0 OR, 2 XR)
Class 164 : METAL FOUNGING
164/1 PROCESS
164/47 .Shaping liquid metal against a forming surface
164/133 ..Introduction control or manipulation of charge
- 2 164/900 (0 OR, 2 XR)
Class 164 : METAL FOUNGING
164/900 RHEO-CASTING
- 2 165/46 (0 OR, 2 XR)
Class 165 : HEAT EXCHANGE
165/46 FLEXIBLE ENVELOPE OR COVER TYPE
- 2 174/260 (0 OR, 2 XR)
Class 174 : ELECTRICITY: CONDUCTORS AND INSULATORS
174/68.1 CONDUITS, CABLES OR CONDUCTORS
174/250 .Preformed panel circuit arrangement (e.g., printed circuit)
174/260 ..with electrical device
- 2 257/692 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/688 .with large area flexible electrodes in press contact with opposite sides of active semiconductor chip
and surrounded by an insulating element, e.g., ring
257/690 .with contact or lead
257/692 ..with particular lead geometry
- 2 257/712 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/688 .with large area flexible electrodes in press contact with opposite sides of active semiconductor chip and surrounded by an insulating element, e.g., ring
257/712 .with provision for cooling the housing or its contents
- 2 257/738 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD
257/737 .Bump leads
257/738 ..Ball shaped
- 2 257/774 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD
257/773 .Of specified configuration
257/774 ..via (interconnection hole) shape

10042281_CLSTITLES

- 2 257/778 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD
 257/778 .Flip chip
- 2 257/780 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD
 257/780 .Ball or nail head type contact, lead, or bond
- 2 257/E23.008 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR
 SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E23.003 .Mountings, e.g., nondetachable insulating
 substrates (EPO)
 257/E23.005 ..Characterized by material or its electrical
 properties (EPO)
 257/E23.008 ...Semiconductor insulating substrates (EPO)
- 2 257/E23.021 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR
 SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E23.01 .Arrangements for conducting electric current
 to or from solid-state body in operation, e.g., leads,
 terminal arrangements (EPO)
 257/E23.012 ..Consisting of lead-in layers inseparably
 applied to semiconductor body (EPO)
 257/E23.019 ...Consisting of layered constructions
 comprising conductive layers and insulating layers,
 e.g.,
 257/E23.021planar contacts (EPO)
 257/E23.021Bump or ball contacts (EPO)
- 2 257/E23.075 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR
 SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E23.01 .Arrangements for conducting electric current
 to or from solid-state body in operation, e.g.,
 leads,
 terminal arrangements (EPO)
 257/E23.023 ..Consisting of soldered or bonded
 constructions (EPO)
 257/E23.06 ...Leads, i.e., metallizations or lead frames
 on insulating substrates, e.g., chip carriers (EPO)
 257/E23.072Characterized by materials (EPO)
 257/E23.075Conductive materials containing organic
 materials or pastes, e.g., for thick films (EPO)
- 2 257/E23.088 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/E23.079 ..For integrated circuit devices, e.g., power
 bus, number of leads (EPO)
 257/E23.08 .Arrangements for cooling, heating, ventilating
 or temperature compensation; temperature-sensing
 arrangements (EPO)
 257/E23.087 ..Fillings or auxiliary members in containers
 or encapsulations selected or arranged to facilitate
 heating or cooling (EPO)
 257/E23.088 ...Cooling by change of state, e.g., use of

10042281_CLSTITLES
heat pipes (EPO)

- 2 257/E23.092 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.079 ..For integrated circuit devices, e.g., power
bus, number of leads (EPO)
257/E23.08 .Arrangements for cooling, heating, ventilating
or temperature compensation; temperature-sensing
arrangements (EPO)
257/E23.087 ..Fillings or auxiliary members in containers
or encapsulations selected or arranged to facilitate
heating or cooling (EPO)
257/E23.09 ...Auxiliary members in containers
characterized by their shape, e.g., pistons (EPO)
257/E23.092Auxiliary members in encapsulations (EPO)

- 2 257/E25.023 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E25.001 ASSEMBLIES CONSISTING OF PLURALITY OF
INDIVIDUAL SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES
(EPO)
257/E25.002 .All devices being of same type, e.g.,
assemblies of rectifier diodes (EPO)
257/E25.022 ..Devices having separate containers (EPO)
257/E25.023 ...Device consisting of plurality of
semiconductor or other solid-state devices or components
formed in or on common substrate, e.g., integrated
circuit device (EPO)

- 2 359/2 (0 OR, 2 XR)
Class 359 : OPTICS: SYSTEMS
359/1 HOLOGRAPHIC SYSTEM OR ELEMENT
359/2 .Authentication
- 2 361/699 (2 OR, 0 XR)
Class 361 : ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
361/600 HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE
ELECTRICAL COMPONENTS
361/679 .For electronic systems and devices
361/688 ..With cooling means
361/689 ...Fluid
361/699Liquid
- 2 361/761 (0 OR, 2 XR)
Class 361 : ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
361/600 HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE
ELECTRICAL COMPONENTS
361/679 .For electronic systems and devices
361/748 ..Printed circuit board
361/760 ...Connection of components to board
361/761Component within printed circuit board
- 2 361/764 (0 OR, 2 XR)
Class 361 : ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
361/600 HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE
ELECTRICAL COMPONENTS
361/679 .For electronic systems and devices

10042281_CLSTITLES

361/748 ..Printed circuit board
 361/760 ...Connection of components to board
 361/761Component within printed circuit board
 361/764Integrated circuit

2 361/820 (1 OR, 1 XR)
 Class 361 : ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES

361/600 HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE
 ELECTRICAL COMPONENTS
 361/679 .For electronic systems and devices
 361/820 ..For semiconductor device

2 430/1 (2 OR, 0 XR)
 Class 430 : RADIATION IMAGERY CHEMISTRY: PROCESS,
 COMPOSITION, OR PRODUCT THEREOF
 430/1 HOLOGRAPHIC PROCESS, COMPOSITION, OR PRODUCT